

CLAIMS

We claim:

1. A roller top conveyor chain assembly comprising:
 - a first strand of conveyor chain formed from a plurality of first link assemblies;
 - a second strand of conveyor chain formed from a plurality of second link assemblies, said second strand of conveyor chain being substantially parallel to said first strand of conveyor chain for cooperatively conveying an object with said first strand of conveyor chain;
 - a first roller support frame extending between one of said first link assemblies of said plurality of first link assemblies and one of said second link assemblies of said plurality of second link assemblies, said roller support frame including a top wall having at least one upwardly opening cavity formed therein;
 - a roller rotatably mounted in said cavity for engaging the object being conveyed by said first and second strands of conveyor chain.
2. The roller top conveyor chain assembly as in claim 1, in which a first end of said first roller frame is fixed to said one of said first link assemblies, and a second end of said first roller frame is fixed to said one of said second link assemblies.

3. The roller top conveyor chain assembly as in claim 2, in which said one of said first link assemblies includes a flight extending toward said one of said second link assemblies, and said first end of said first roller frame is fixed to said flight.

4. The roller top conveyor chain assembly as in claim 1, including a third strand of conveyor chain formed from a plurality of third link assemblies, said third strand of conveyor chain being substantially parallel to said second strand of conveyor chain for cooperatively conveying the object with said first and second strands of conveyor chain, and a second roller support frame extending between one of said third link assemblies of said plurality of third link assemblies and one of said second link assemblies of said plurality of second link assemblies, said roller support frame including a top wall having at least one upwardly opening cavity formed therein, and a roller rotatably mounted in said cavity formed in said top wall of said second roller support frame for supporting the object being conveyed by said first, second, and third strands of conveyor chain.

5. The roller top conveyor chain assembly as in claim 4, in which said one of said second link assemblies includes a first flight extending toward said one of said first link assemblies and a second flight extending toward said one of said third link assemblies, and a first end of said first roller frame is fixed to said first flight and a first
5 end of said second roller frame is fixed to said second flight.

6. The roller top conveyor chain assembly as in claim 1, in which said roller includes an axis of rotation, and said axis of rotation is parallel to said second strand of conveyor chain.

7. The roller top conveyor chain assembly as in claim 1, in which said roller is a ball.

8. The roller top conveyor chain assembly as in claim 7, in which said ball forms part of a roller ball assembly fixed to said first roller support frame.

9. The roller top conveyor chain assembly as in claim 1, in which said roller includes an axis of rotation, and said axis of rotation defines an angle that is greater than 0 degrees with said second strand of conveyor chain.

10. The roller top conveyor chain assembly as in claim 9, in which said angle is approximately 90 degrees to form a low back pressure conveyor chain assembly.

11. The roller top conveyor chain assembly as in claim 1, including a third strand of conveyor chain formed from a plurality of third link assemblies, said third strand of conveyor chain being substantially parallel to and between said first and second strands of conveyor chain for cooperatively conveying the object with said first and
5 second strands of conveyor chain.

12. A roller top conveyor chain assembly comprising:

a first strand of conveyor chain formed from a plurality of first link assemblies, at least one of said link assemblies including a flight;

a second strand of conveyor chain formed from a plurality of second link assemblies, said second strand of conveyor chain being substantially parallel to said first strand of conveyor chain for cooperatively conveying an object with said first strand of conveyor chain, and at least one of said second link assemblies including a flight;

a first roller support frame extending between said flight of said first link assemblies of said plurality of first link assemblies and said flight of said second link assemblies of said plurality of second link assemblies, said roller support frame including a top wall;

a roller rotatably mounted relative to said top wall for engaging the object being conveyed by said first and second strands of conveyor chain.

13. The roller top conveyor chain assembly as in claim 12, including a third strand of conveyor chain formed from a plurality of third link assemblies, said third strand of conveyor chain being substantially parallel to said second strand of conveyor chain for cooperatively conveying the object with said first and second strands of conveyor chain, and a second roller support frame extending between one of said third link assemblies of said plurality of third link assemblies and one of said second link assemblies of said plurality of second link assemblies, said roller support frame including a top wall having at least one upwardly opening cavity formed therein, and a roller rotatably mounted in said cavity formed in said top wall of said second roller support frame for supporting the object being conveyed by said first, second, and third strands of conveyor chain.

14. The roller top conveyor chain assembly as in claim 12, in which said roller includes an axis of rotation, and said axis of rotation is parallel to said second strand of conveyor chain.

15. The roller top conveyor chain assembly as in claim 12, in which said roller is a ball.

16. The roller top conveyor chain assembly as in claim 15, in which said ball forms part of a roller ball assembly fixed to said first roller support frame.

17. The roller top conveyor chain assembly as in claim 12, in which said roller includes an axis of rotation, and said axis of rotation defines an angle that is greater than 0 degrees with said second strand of conveyor chain.

18. The roller top conveyor chain assembly as in claim 17, in which said angle is approximately 90 degrees to form a low back pressure conveyor chain assembly.

19. The roller top conveyor chain assembly as in claim 12, including a third strand of conveyor chain formed from a plurality of third link assemblies, said third strand of conveyor chain being substantially parallel to and between said first and second strands of conveyor chain for cooperatively conveying the object with said first and
5 second strands of conveyor chain.